AN3190
Application note

LQFP144 pinout compatibility analysis SPC560Px / SPC56EL60

Introduction

The Power Architecture® based SPC560Px and SPC56EL60 microcontrollers are designed for automotive safety and chassis applications.

The performance and safety features implemented in these devices offer a scalable safety MCU platform.

Scalability in terms of application software is guaranteed by the following points:

- SPC560Px and SPC56EL60 use the same peripherals.
- SPC560Px core (e200z0) and SPC56EL60 core (e200z4) offer full assembler language compatibility; the same tool chain can be used to develop applications for both devices (execution speed differences between the two devices are to be expected).

To guarantee the maximum scalability in terms of hardware, the pin muxing of these devices has been chosen very carefully. The result is a high level of compatibility in terms of pin mapping.

This application note describes how to reach the highest level LQFP144 pin compatibility when designing an application with SPC560Px and SPC56EL60 devices.

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1 Description

To design a PCB compatible with the SPC560Px and SPC56EL60 144-pin LQFP, the PCB designer must know the pinout differences between these two devices.

When comparing, pin per pin, the differences between the two devices, pins can be classified in four groups:

- Identical pins
- Upward compatible pins
- Partially compatible pins
- Non-compatible pins

This application note follows this organization to show the differences between the pins of each device and gives advice, whenever possible, on how to manage the differences.

2 Pad compatibility

This section describes the pads which demand particular attention when either an SPC560Px/SPC56EL60 compatible application or a compatible board is developed.

Pads which are not covered in this section are fully compatible. For a detailed description of all SPC560Px/SPC56EL60 pads refer to *Appendix A: Detailed pad list*.

Even if oscillator pads and reset pads are considered compatible, additional information on these pads is provided *Section 2.4: Oscillator pads* and *Section 2.5: Reset pad*.

2.1 Upward compatible pads

If an SPC56EL60 pad has all the functionalities of an SPC560Px pad plus additional ones, it is an upward compatible pad.

Table 1 shows the list of all the upward compatible pads.

Table 1. List of the SPC560Px upward compatible pads(1)

Pad number	Port name
32	D[8] (*A.32*)
81	G[8] (*A.81*)
85	G[5] (*A.85*)
100	B[2] (*A.100*)
102	G[2] (*A.102*)
104	G[3] (*A.104*)
106	F[12] (*A.106*)
110	B[1] (*A.110*)
112	F[13] (*A.112*)

1. A full description of all these pads can be found in *Appendix A: Detailed pad list*.

2.2 Partially compatible pads

There are two types of partially compatible pads, according to the supported functionalities:

- Some but not all SPC560Px functions are supported on SPC56EL60 (refer to *Table 2*)
- Some but not all SPC56EL60 functions are supported on SPC560Px(a) (refer to *Table 3*)

Table 2 and *Table 3* show these pads and indicate other pads which offer compatibility on the same function.

Users of these devices must carefully choose the functionality of each of these pads to obtain a fully SPC560Px/SPC56EL60 compatible application board.

a. This pad group also includes the upward compatible pads.

Table 2. Partially compatible pads: SPC560Px functionalities not supported on SPC56EL60

Pad No.	Functionality not supported on SPC56EL60	Comment
33 (*A.33*)	FCU 0 - F[0]	For safety reasons SPC56EL60 has this function on a dedicated pad. Compatibility on the F[0] functionality can be achieved on pad 38.
	DSPI 3 - SOUT	SPC56EL60 does not include the DSPI 3.
34 (*A.34*)	DSPI 3 - SCK	SPC56EL60 does not include the DSPI 3.
37 (*A.37*)	DSPI 3 - SIN	SPC56EL60 does not include the DSPI 3.
38 (*A.38*)	GPIO[96] - G[0]	Not supported by SPC56EL60
	EIRQ[30]	SPC56EL60 supports this functionality on pad 106.
73 (*A.73*)	FCU - F[0]	For safety reasons SPC56EL60 supports this function on a dedicated pad. Compatibility on the F[0] functionality can be achieved on pad 38.
74 (*A.74*)	FCU - F[1]	For safety reasons SPC56EL60 supports this function on a dedicated pad. Compatibility on the F[0] functionality can be achieved on pad 141.
76 (*A.76*)	DSPI 3 - CS 0	SPC56EL60 does not include the DSPI 3.
78 (*A.78*)	DSPI 3 - CS 1	SPC56EL60 does not include the DSPI 3.
80 (*A.80*)	DSPI 3 - CS 0	SPC56EL60 does not include the DSPI 3.
82 (*A.82*)	DSPI 3 - CS 1	SPC56EL60 does not include the DSPI 3.
117 (*A.117*)	DSPI 3 - SCK	SPC56EL60 does not include the DSPI 3.
119 (*A.119*)	DSPI 3 - SOUT	SPC56EL60 does not include the DSPI 3.
121 (*A.121*)	DSPI 3 - SIN	SPC56EL60 does not include the DSPI 3.
133 (*A.133*)	FlexRay - DBG 0	SPC56EL60 supports this function on pad 81, but compatibility on this function cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
	DSPI 3 - CS 3	SPC56EL60 does not include the DSPI 3.
139 (*A.139*)	FlexRay - DBG 3	SPC56EL60 supports this function on pad 75. But compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
	DSPI 3 - CS 0	SPC56EL60 does not include the DSPI 3.

Table 3. Partially compatible pads: SPC56EL60 functionalities not supported on SPC560Px

Pad No.	Functionality not supported on SPC560Px	Comment
32 (*A.32*)	eTimer 1 - ETC[4]	Compatibility on this function can be achieved on pad 112, 128 and 143.
33 (*A.33*)	FlexPWM 0 - FAULT[2]	Compatibility on this function can be achieved on pad 77.
34 (*A.34*)	FlexPWM 0 - X[3]	Compatibility on this function can be achieved on pad 85 and 140.
37 (*A.37*)	SWG	SPC560Px does not support the SWG.

Table 3. Partially compatible pads: SPC56EL60 functionalities not supported on SPC560Px

Pad No.	Functionality not supported on SPC560Px	Comment
75 (*A.75*)	FlexRay - DBG 3	SPC560Px supports this function on pad 139, but compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
76 (*A.76*)	eTimer 0 - ETC[0]	Compatibility can be achieved on pad 73.
77 (*A.77*)	FlexRay - DBG 2	SPC560Px supports this function on pad 137, but compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
	DSPI 2 - CS 3	Compatibility on this function can be achieved on pad 82.
78 (*A.78*)	eTimer 0 - ETC[1]	Compatibility on this function can be achieved on pad 74.
79 (*A.79*)	EIRQ[29]	SPC560Px supports this function on pad 135, but compatibility cannot be achieved.
	FlexRay - DBG 1	SPC560Px supports this function on pad 135, but full compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
	DSPI 1 - CS 1	SPC560Px supports this function on pad 130, but full compatibility cannot be achieved.
81 (*A.81*)	EIRQ[21]	SPC560Px supports this function on pad 133, but compatibility cannot be achieved.
	FlexRay - DBG 0	SPC560Px supports this function on pad 133, but full compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
	DSPI 0 - CS 1	SPC560Px supports this function on pad 16, but full compatibility cannot be achieved.
86 (*A.86*)	GPIO[21] - B[5]	Compatibility on this function cannot be achieved.
89 (*A.89*)	GPIO[20] - B[4]	Compatibility on this function cannot be achieved.
100 (*A.100*)	eTimer 0 - ETC[5]	Compatibility on this function can be achieved on pad 47 and pad 82.
102 (*A.102*)	DSPI 1 - CS 1	SPC560Px supports this function on pad 130, but compatibility cannot be achieved.
104 (*A.104*)	eTimer 0 - ETC[4]	Compatibility on this function can be achieved on pad 64, 80 and108.
105 (*A.105*)	eTimer 0 - ETC[3]	Compatibility on this function can be achieved on pad 92.
106 (*A.106*)	EIRQ[30]	SPC560Px supports this function on pad 96, but compatibility cannot be achieved.
110 (*A.110*)	CAN 1 - RXD	Compatibility on this function can be achieved on pad 144.
112 (*A.112*)	EIRQ[31]	SPC560Px supports this function on pad 141, but compatibility cannot be achieved.

Table 3. Partially compatible pads: SPC56EL60 functionalities not supported on SPC560Px

Pad No.	Functionality not supported on SPC560Px	Comment
117 (*A.117*)	eTimer 0 - ETC[5]	Compatibility on this functionality can be achieved on pad 24 and 82.
	DSPI 2 - CS 3	Compatibility on this functionality can be achieved on pad 82.
119 (*A.119*)	eTimer 1 - ETC[5]	Compatibility can be achieved using pad 14, 129 and 144.
121 (*A.121*)	DSPI 0 - CS 1	SPC560Px supports this function on pad 16, but compatibility cannot be achieved.
133 (*A.133*)	FlexPWM 0 - A[1]	Compatibility can be achieved on pad 15 and 124.
	eTimer 0 - ETC[2]	Compatibility on this function can be achieved on pad 84.
139 (*A.139*)	DSPI 0 - CS6	SPC560Px supports this function on pad 130, but compatibility cannot be achieved.

2.3 Non-compatible pads

SPC56EL60 is more demanding in terms of power consumption than is SPC560Px; thus certain pads which are functional on SPC560Px are used as power supply pads on SPC56EL60. From a functional point of view the compatibility of these pads between SPC560Px and SPC56EL60 is broken.

Pad 123, although not a power supply pad, is another pad where the functional compatibility is broken. On SPC56EL60 this pad is dedicated to the JCOMP functionality[(b)].

During the reset phase, these SPC560Px pads are in high impedance status. This means that if these pads are not configured as output and are not used by the application a 3.3 V or 1.2 V voltage can be applied to them without risk. As a result, a certain level of compatibility between SPC56EL60 and SPC560Px can be achieved in these pads.

Table 4 and *Table 5* list the non-compatible pads.

Table 4. Non-compatible pads: Functional on SPC560Px – power supply on SPC56EL60

Pad No.	SPC56EL60 power supply	SPC560Px function	Comment
16 (*A.16*)	VDD_VH_REG	GPIO[35] - C[3]	SPC56EL60 does not support this digital IO.
		EIRQ[21]	SPC56EL60 supports these functions on pad 81, but compatibility on these functions cannot be achieved.
		DSPI 0 - CS 1	
		eTimer - ETC[4]	
		LINFlex 1 - TXD	Compatibility on this functionality can be achieved on pad 115.
39 (*A.39*)	VDD_LV_COR0_4	GPIO[65] - E[1]	SPC56EL60 does not support this digital IO.
		ADC 0 - AN[4]	This analog channel is supported by SPC56EL60 on pad 46.

b. The JCOMP signal (dedicated input pin) is used to reset the JTAGC independent from the state of the device.

Table 4. Non-compatible pads: Functional on SPC560Px – power supply on SPC56EL60

Pad No.	SPC56EL60 power supply	SPC560Px function	Comment
40 (*A.40*)	VSS_LV_COR0_4	GPIO[67] - E[3]	SPC56EL60 does not support this digital IO.
		ADC 0 - AN[6]	This analog channel is supported by SPC56EL60 on pad 48.
58 (*A.58*)	VDD_HV_ADV0_ADV1	GPI0[63] - D[15]	SPC56EL60 does not support this digital IO.
		ADC 1 - AN[4]	SPC56EL60 supports this analog channel on pad 65.
59 (*A.59*)	VSS_HV_ADV0_ADV1	GPI0[72] - E[8]	SPC56EL60 does not support this digital IO.
		ADC 1 - AN[6]	SPC56EL60 supports this analog channel on pad 67.
95 (*A.95*)	VDD_HV_REG	GPIO[61] - D[13]	SPC56EL60 does not support this digital IO.
		FlexPWM 0 - A[1]	SPC56EL60 supports this function on pad 15, 124 and 133. Compatibility on this function can be achieved on pad 15 and 124.
		DSPI 3 - CS 2	SPC56EL60 does not include the DSPI 3.
		DSPI 2 - SOUT	Compatibility on this function can be achieved on pad 74 and 122.
130 (*A.130*)	VDD_HV_REG_2	GPIO[40] - C[8]	SPC56EL60 does not support this digital IO.
		FlexPWM 0 - FAULT[2]	SPC56EL60 supports this function on pad 33 and 77. Compatibility can be achieved using pad 77.
		DSPI 1 - CS 1	SPC56EL60 supports this function on pad 79 and 102, but compatibility cannot be achieved.
		DSPI 0 - CS 6	SPC56EL60 supports this function on pad 139, but compatibility cannot be achieved.
135 (*A.135*)	VDD_LV_COR	GPIO[81] - F[1]	SPC56EL60 does not support this digital IO.
		EIRQ[29]	SPC56EL60 supports this function on pad 79, but compatibility cannot be achieved.
		FlexRay - DBG 1	SPC56EL60 supports this function on pad 79, but compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
		DSPI 3 - CS 2	SPC56EL60 does not include the DSPI 3.
137 (*A.137*)	VSS_LV_COR	GPIO[82] - F[2]	SPC56EL60 does not support this digital IO.
		FlexRay - DBG 2	SPC56EL60 supports this function on pad 77, but compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
		DSPI 3 - CS 1	SPC56EL60 does not include the DSPI 3.

Table 5. Non-compatible pad 123: Functional on SPC560Px – JCOMP on SPC56EL60

Pad No.	SPC56EL60 function	SPC560Px function	Comment
123 (*A.123*)	JCOMP	GPIO[41] - C[9]	SPC56EL60 does not support this function.
		FlexPWM 0 - FAULT[2]	SPC56EL60 supports this function on pad 33 and 77. Compatibility can be achieved using pad 77.
		DSPI 2 - CS 3	SPC56EL60 supports this function on pad 77, 82, 85 and 117. Compatibility can be achieved using pad 82.
		FlexPWM 0 - X[3]	SPC56EL60 supports this function on pad 34, 85 and 140. Compatibility can be achieved using pad 85 and 140.

2.4 Oscillator pads

Both devices, SPC560Px and SPC56EL60, have two pads dedicated to the internal oscillator: pad 29 and pad 30.

The SPC560Px/SPC56EL60 compatibility depends on the configuration of the internal oscillator.

If the oscillator is configured as bypass mode, the two pads are fully compatible (see *Figure 1* and *Figure 2*).

If the internal oscillator is working in crystal/oscillation mode (see *Figure 3* and *Figure 4*) the compatibility is achieved only if Rd is a 0 Ω resistor.

Figure 1. SPC560Px XOSC circuit – bypass mode configuration

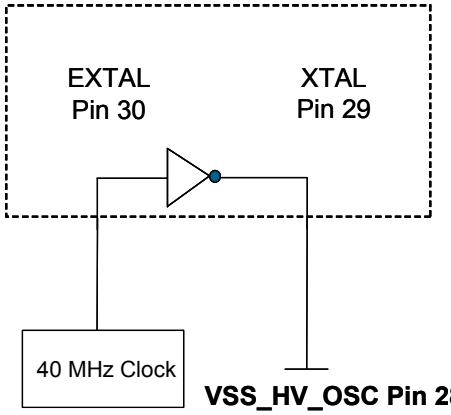
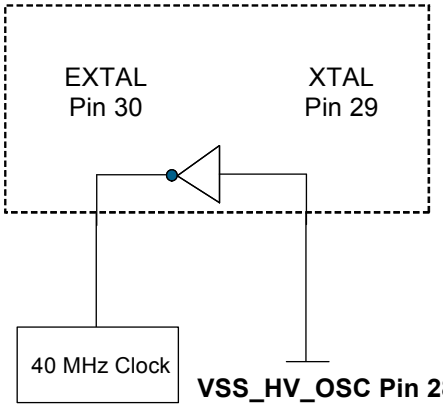


Figure 2. SPC56EL60 XOSC circuit – bypass mode configuration(1)



1. In this mode, the analog portion of crystal oscillator (amplifier) is disabled. An external clock, compatible to CMOS levels, can be applied at EXTAL pad.

Figure 3. SPC560Px XOSC circuit – crystal/oscillation mode configuration

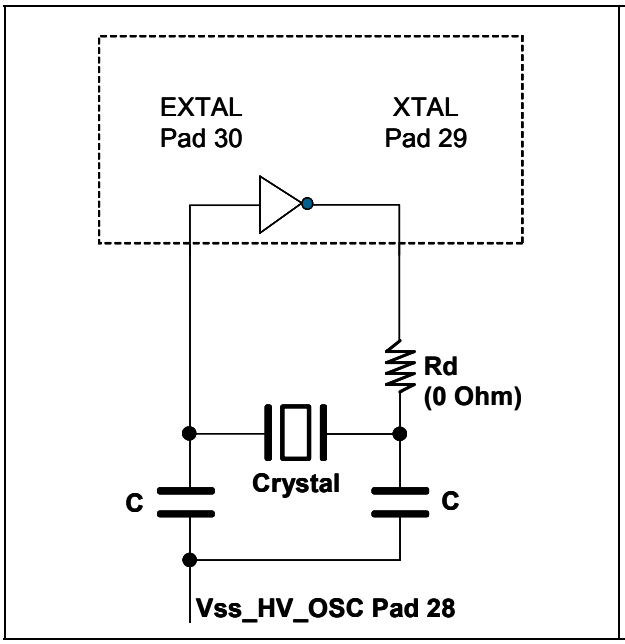
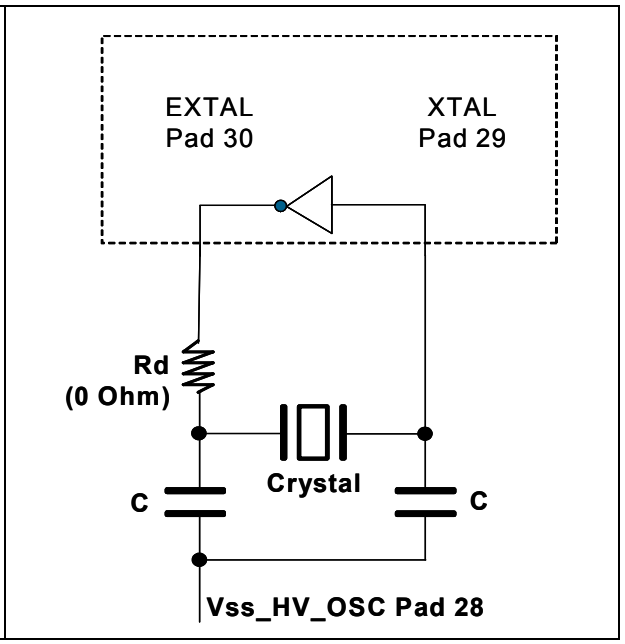


Figure 4. SPC56EL60 XOSC circuit – crystal/oscillation mode configuration



2.5 Reset pad

The negative logic reset on pad 31 differs between the two devices as follows:

- SPC560Px reset has an internal pull up.
- SPC56EL60 reset has an internal pull down.

This difference must be taken into account during the design of the external reset circuitry of a board which must be SPC560Px/SPC56EL60 compatible.

3 Summary

SPC560Px and SPC56EL60 have a very high level of pin compatibility in the LQFP144 package. If the suggestions described in this application note are implemented, a single PCB can be used for SPC560Px based and SPC56EL60 based applications.

Appendix A Detailed pad list

A.1 Pad 1 - NMI

Table 6. Pad 1 - NMI: fully compatible

SPC560Px	SPC56EL60	Comment
NMI		—

A.2 Pad 2 - A[6]

Table 7. Pad 2 - A[6]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[6]		—
EIRQ[6]		—
DSPI 1 - SCK		—

A.3 Pad 3 - D[1]

Table 8. Pad 3 - D[1]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[49]		—
eTimer - ETC[2]		—
CTU - EXT TRG		—
FlexRay - CA RX		—

A.4 Pad 4 - F[4]

Table 9. Pad 4 - F[4]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[84]		—
Nexus - MDO[3]		—

A.5 Pad 5 - F[5]

Table 10. Pad 5 - F[5]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[85]		—
Nexus - MDO[2]		—

A.6 Pad 6

Table 11. Pad 6: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_IO0	VDD_HV_IO	—

A.7 Pad 7

Table 12. Pad 7: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_IO0	VSS_HV_IO	—

A.8 Pad 8 - F[6]

Table 13. Pad 8 - F[6]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[86]		—
Nexus - MDO[1]		—

A.9 Pad 9 - MDO0

Table 14. Pad 9 - MDO0: fully compatible

SPC560Px	SPC56EL60	Comment
Nexus - MDO[0]		—

A.10 Pad 10 - A[7]

Table 15. Pad 10 - A[7]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[7]		—
EIRQ[7]		—
DSPI 1 - SOUT		—

A.11 Pad 11 - C[4]

Table 16. Pad 11 - C[4]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[36]		—
EIRQ[22]		—
DSPI 0 - CS 0		—
FlexPWM 0 - X[1]		—
SSCM - DEBUG[4]		—

A.12 Pad 12 - A[8]

Table 17. Pad 12 - A[8]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[8]		—
EIRQ[8]		—
DSPI 1 - SIN		—

A.13 Pad 13 - C[5]

Table 18. Pad 13 - C[5]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[37]		—
EIRQ[23]		—
FlexPWM - FAULT[3]		—
DSPI 0 - SCK		—
SSCM - DEBUG[5]		—

A.14 Pad 14 - A[5]

Table 19. Pad 14 - A[5]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[5]		—
EIRQ[5]		—
DSPI 1 - CS 0		—
eTimer 1 - ETC[5]		—
DSPI 0 - CS 7		—

A.15 Pad 15 - C[7]

Table 20. Pad 15 - C[7]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[39]		—
DSPI 0 - SIN		—
FlexPWM 0 - A[1]		—
SSCM - DEBUG[7]		—

A.16 Pad 16

Table 21. Pad 16: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[35] - C[3]	—	SPC56EL60 does not support this digital IO.
EIRQ[21]	—	SPC56EL60 supports this functionality on pad 81. Compatibility on this functionality cannot be achieved.
DSPI 0 - CS 1	—	SPC56EL60 supports this functionality on pad 81. Compatibility on this functionality cannot be achieved.
eTimer - ETC[4]	—	SPC56EL60 supports this functionality on pad 81. Compatibility on this functionality cannot be achieved.
LINFlex 1 - TXD	—	Compatibility on this functionality can be achieved on pad 115.
—	VDD_HV_REG_0	SPC56EL60 has more pins dedicated to the power supply than SPC560Px.

A.17 Pad 17

Table 22. Pad 17: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_LV_COR0	VSS_LV_COR	—

A.18 Pad 18

Table 23. Pad 18: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_LV_COR0	VDD_LV_COR	—

A.19 Pad 19 - F[7]

Table 24. Pad 19 - F[7]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[87]		—
Nexus - MCKO		—

A.20 Pad 20 - F[8]

Table 25. Pad 20 - F[8]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[88]		—
Nexus - MSEO[1]		—

A.21 Pad 21

Table 26. Pad 21: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_IO1	VDD_HV_IO	—

A.22 Pad 22

Table 27. Pad 22: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_IO1	VSS_HV_IO	—

A.23 Pad 23 - F[9]

Table 28. Pad 23 - F[9]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[89]		—
Nexus - MSEO0		—

A.24 Pad 24 - F[10]

Table 29. Pad 24 - F[10]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[90]		—
Nexus - EVTO		—

A.25 Pad 25 - F[11]

Table 30. Pad 25 - F[11]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[91]		—
Nexus - EVTI		—

A.26 Pad 26 - D[9]

Table 31. Pad 26 - D[9]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[57]		—
FlexPWM 0 - X[0]		—
LINFlex 1 - TXD		—

A.27 Pad 27 - VDD_HV_OSC

Table 32. Pad 27 - VDD_HV_OSC: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_OSC		—

A.28 Pad 28 - VSS_HV_OSC

Table 33. Pad 28 - VSS_HV_OSC: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_OSC		—

A.29 Pad 29 - XTAL

Table 34. Pad 29 - XTAL: partially compatible(1)

SPC560Px	SPC56EL60	Comment
XTAL		—

1. For a detailed description of the compatibility refer to *Section 2.4*.

A.30 Pad 30 - EXTAL

Table 35. Pad 30 - EXTAL: partially compatible(1)

SPC560Px	SPC56EL60	Comment
EXTAL		—

1. For a detailed description of the compatibility refer to *Section 2.4*.

A.31 Pad 31 - RESET

Table 36. Pad 31 - RESET: partially compatible(1)

SPC560Px	SPC56EL60	Comment
RESET		—

1. For a detailed description of the compatibility refer to *Section 2.5*.

A.32 Pad 32 - D[8]

Table 37. Pad 32 - D[8]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[56]		—
DSPI 1 - CS 2		—
DSPI 0 - CS 5		—

Table 37. Pad 32 - D[8]: upward compatible (continued)

SPC560Px	SPC56EL60	Comment
FlexPWM 0 - FAULT[3]		—
—	eTimer 1 - ETC[4]	SPC560Px supports this function on pad 16, 112, 128 and 143. Compatibility on this function can be achieved on pad 112, 128 and 143.

A.33 Pad 33 - D[5]

Table 38. Pad 33 - D[5]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[53]		—
DSPI 0 - CS 3		—
FCU 0 - F[0]	—	For safety reasons SPC56EL60 has this function on a dedicated pad. Compatibility on the F[0] functionality can be achieved on pad 38.
DSPI 3 - SOUT	—	SPC56EL60 does not include the DSPI 3.
—	FlexPWM 0 - FAULT[2]	SPC560Px supports this function on pad 77, 123 and 130. Compatibility on this function can be achieved on pad 77.

A.34 Pad 34 - D[6]

Table 39. Pad 34 - D[6]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[54]		—
FlexPWM 0 - FAULT[1]		—
DSPI 0 - CS 2		—
DSPI 3 - SCK	—	SPC56EL60 does not include the DSPI 3.
—	FlexPWM 0 - X[3]	SPC560Px supports this function on pad 85, 123 and 140. Compatibility on this function can be achieved on pad 85 and 140.

A.35 Pad 35

Table 40. Pad 35: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_LV_COR3	VSS_LV_PLL0_PLL1	—

A.36 Pad 36

Table 41. Pad 36: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_LV_COR3	VDD_LV_PLL0_PLL1	—

A.37 Pad 37 - D[7]

Table 42. Pad 37 - D[7]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[55]		—
DSPI 1 - CS 3		—
DSPI 0 - CS 4		—
DSPI 3 - SIN	—	SPC56EL60 does not include the DSPI 3.
—	SWG	SPC560Px does not support the SWG.

A.38 Pad 38

Table 43. Pad 38: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[96] - G[0]	—	Not supported by SPC56EL60
EIRQ[30]	—	SPC56EL60 supports this functionality on pad 106. Compatibility on this functionality cannot be achieved.
FCU - F[0]	FCCU - F[0]	FCU and FCCU both collect SoC faults to signal them on error out pins. Being an enhanced version of the FCU, the FCCU additionally can generate interrupt requests, as well as request safe mode transitions and internal resets for the SoC. For safety reasons on SPC56EL60 this pad is reserved for FCCU error out functionality.

A.39 Pad 39

Table 44. Pad 39: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[65] - E[1]	—	Not supported by SPC56EL60

Table 44. Pad 39: non-compatible (continued)

SPC560Px	SPC56EL60	Comment
ADC 0 - AN[4]	—	This analog channel is supported by SPC56EL60 on pad 46.
—	VDD_LV_COR0_4	—

A.40 Pad 40

Table 45. Pad 40: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[67] - E[3]	—	Not supported by SPC56EL60
ADC 0 - AN[6]	—	This analog channel is supported by SPC56EL60 on pad 48.
—	VSS_LV_COR0_4	—

A.41 Pad 41 - C[1]

Table 46. Pad 41 - C[1]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[33]		—
ADC 0 - AN[2]		—

A.42 Pad 42 - E[4]

Table 47. Pad 42 - E[4]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[68]		—
ADC 0 - AN[7]		—

A.43 Pad 43 - B[7]

Table 48. Pad 43 - B[7]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[23]		—
ADC 0 - AN[0]		—
LINFlex - RXD		—

A.44 Pad 44 - E[5]

Table 49. Pad 44 - E[5]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[69]		—
ADC 0 - AN[8]		—

A.45 Pad 45 - C[2]

Table 50. Pad 45 - C[2]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[34]		—
ADC 0 - AN[3]		—

A.46 Pad 46 - E[6]

Table 51. Pad 46 - E[6]: fully compatible(1)

SPC560Px	SPC56EL60	Comment
GPIO[70]		—
ADC 0 - AN[9]	—	SPC56EL60 does not support this analog channel.
—	ADC 0 - AN[4]	SPC560Px supports this analog channel on pad 39.

1. If this pad is used as analog input a full compatibility is reached by software in such a way that a SPC560Px conversion on channel ADC0_AN[9] corresponds to an SPC56EL60 conversion on channel ADC0_AN[4].

A.47 Pad 47 - B[8]

Table 52. Pad 47 - B[8]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[24]		—
ADC 0 - AN[1]		—
eTimer - ETC[5]		—

A.48 Pad 48 - E[7]

Table 53. Pad 48 - E[7]: fully compatible(1)

SPC560Px	SPC56EL60	Comment
GPIO[71]		—
ADC 0 - AN[10]	—	SPC56EL60 does not support this analog channel.
—	ADC 0 - AN[6]	SPC560Px supports this analog channel on pad 40.

1. If this pad is used as analog input a full compatibility is reached by software in such a way that a SPC560Px conversion on channel ADC0_AN[10] corresponds to an SPC56EL60 conversion on channel ADC0_AN[6].

A.49 Pad 49 - E[2]

Table 54. Pad 49 - E[2]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[66]		—
ADC 0 - AN[5]		—

A.50 Pad 50

Table 55. Pad 50: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_AD0	VDD_HV_ADR0	—

A.51 Pad 51

Table 56. Pad 51: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_AD0	VSS_HV_ADR0	—

A.52 Pad 52 - B[9]

Table 57. Pad 52 - B[9]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[25]		—
ADC 0/1 - AN[11]		—

A.53 Pad 53 - B[10]

Table 58. Pad 53 - B[10]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[26]		—
ADC 0/1 - AN[12]		—

A.54 Pad 54 - B[11]

Table 59. Pad 54 - B[11]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[27]		—
ADC 0/1 - AN[13]		—

A.55 Pad 55 - B[12]

Table 60. Pad 55 - B[12]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[28]		—
ADC 0/1 - AN[14]		—

A.56 Pad 56

Table 61. Pad 56: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_AD1	VDD_HV_ADR1	—

A.57 Pad 57

Table 62. Pad 57: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_AD1	VSS_HV_ADR1	—

A.58 Pad 58

Table 63. Pad 58: non-compatible

SPC560Px	SPC56EL60	Comment
GPI0[63] - D[15]	—	SPC56EL60 does not support this digital IO.
ADC 1 - AN[4]	—	SPC56EL60 supports this analog channel on pad 65.
—	VDD_HV_ADV0_ADV1	—

A.59 Pad 59

Table 64. Pad 59: non-compatible

SPC560Px	SPC56EL60	Comment
GPI0[72] - E[8]	—	SPC56EL60 does not support this digital IO.
ADC 1 - AN[6]	—	SPC56EL60 supports this analog channel on pad 67.
—	VSS_HV_ADV0_ADV1	—

A.60 Pad 60 - B[13]

Table 65. Pad 60 - B[13]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[29]		—
ADC 1 - AN[0]		—
LINFlex 1 - RXD		—

A.61 Pad 61 - E[9]

Table 66. Pad 61 - E[9]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[73]		—
ADC 1 - AN[7]		—

A.62 Pad 62 - B[15]

Table 67. Pad 62 - B[15]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[31]		—
EIRQ[20]		—
ADC 1 - AN[2]		—

A.63 Pad 63 - E[10]

Table 68. Pad 63 - E[10]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[74]		—
ADC 1 - AN[8]		—

A.64 Pad 64 - B[14]

Table 69. Pad 64 - B[14]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[30]		—
EIRQ[19]		—
eTimer 0 - ETC[4]		—
ADC 1 - AN[1]		—

A.65 Pad 65 - B[11]

Table 70. Pad 65 - B[11]: fully compatible(1)

SPC560Px	SPC56EL60	Comment
GPI0[75]		—
ADC 1 - AN[9]	—	SPC56EL60 does not support this analog channel.
—	ADC 1 - AN[4]	SPC560Px supports this analog channel on pad 58.

1. If this pad is used as analog input a full compatibility is reached by software in such a way that a SPC560Px conversion on channel ADC1_AN[9] corresponds to an SPC56EL60 conversion on channel ADC1_AN[4].

A.66 Pad 66 - C[0]

Table 71. Pad 66 - C[0]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[32]		—
ADC 1 - AN[3]		—

A.67 Pad 67 - E[12]

Table 72. Pad 67 - E[12]: fully compatible(1)

SPC560Px	SPC56EL60	Comment
GPI0[76]		—
ADC 1 - AN[10]	—	SPC56EL60 does not support this analog channel.
—	ADC 1 - AN[6]	SPC560Px supports this analog channel on pad 59.

1. If this pad is used as analog input a full compatibility is reached by software in such a way that a SPC560Px conversion on channel ADC1_AN[10] corresponds to an SPC56EL60 conversion on channel ADC1_AN[6].

A.68 Pad 68 - E[0]

Table 73. Pad 68 - E[0]: fully compatible

SPC560Px	SPC56EL60	Comment
GPI0[64]		—
ADC 1 - AN[5]		—

A.69 Pad 69 - BCTRL

Table 74. Pad 69 - BCTRL: fully compatible

SPC560Px	SPC56EL60	Comment
BCTRL		—

A.70 Pad 70

Table 75. Pad 70: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_LV_REGCOR	VDD_LV_COR	—

A.71 Pad 71

Table 76. Pad 71: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_LV_REGCOR	VSS_LV_COR	—

A.72 Pad 72

Table 77. Pad 72: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_REG	VDD_HV_PMU	—

A.73 Pad 73 - A[0]

Table 78. Pad 73 - A[0]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[0]		—
EIRQ[0]		—
eTimer 0 - ETC[0]		—
DSPI 2 - SCK		—
FCU - F[0]	—	For safety reasons SPC56EL60 supports this function on a dedicated pad. Compatibility on the F[0] functionality can be achieved on pad 38.

A.74 Pad 74 - A[1]

Table 79. Pad 74 - A[1]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[1]		—
EIRQ[1]		—
eTimer - ETC[1]		—
DSPI 2 - SOUT		—
FCU - F[1]	—	For safety reasons SPC56EL60 supports this function on a dedicated pad. Compatibility on the F[1] functionality can be achieved on this pad.

A.75 Pad 75 - G[11]

Table 80. Pad 75 - G[11]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[107]		—
FlexPWM 0 - FAULT[3]		—
—	FlexRay - DBG 3	SPC560Px supports this function on pad 139, but compatibility with SPC56EL60 cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.

A.76 Pad 76 - D[10]

Table 81. Pad 76 - D[10]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[58]		—
FlexPWM 0 - A[0]		—
DSPI 3 - CS 0	—	SPC56EL60 does not include the DSPI 3.
—	eTimer 0 - ETC[0]	Compatibility can be achieved on pad 73.

A.77 Pad 77 - G[10]

Table 82. Pad 77 - G[10]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[106]		—
FlexPWM 0 - FAULT[2]		—
—	FlexRay - DBG 2	SPC560Px supports this function on pad 137, but compatibility with SPC56EL60 cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
—	DSPI 2 - CS 3	SPC560Px supports this function on pad 82 and pad 123. Compatibility with SPC56EL60 can be achieved using pad 82.

A.78 Pad 78 - D[11]

Table 83. Pad 78 - D[11]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[59]		—
FlexPWM 0 - B[0]		—
DSPI 3 - CS 1	—	SPC56EL60 does not include the DSPI 3.
—	eTimer 0 - ETC[1]	Full compatibility on this function can be achieved on pad 74.

A.79 Pad 79 - G[9]

Table 84. Pad 79 - G[9]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[105]		—
FlexPWM 0 - FAULT[1]		—
—	EIRQ[29]	SPC560Px supports this function on pad 135, but full compatibility cannot be achieved.
—	FlexRay - DBG 1	SPC560Px supports this function on pad 135, but full compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
—	DSPI 1 - CS 1	SPC560Px supports this function on pad 130, but full compatibility cannot be achieved.

A.80 Pad 80 - C[11]

Table 85. Pad 80 - C[11]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[43]		—
eTimer 0 - ETC[4]		—
DSPI 2 - CS 2		—
DSPI 3 - CS 0	—	SPC56EL60 does not include the DSPI 3.

A.81 Pad 81 - G[8]

Table 86. Pad 81 - G[8]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[104]		—
FlexPWM 0 - FAULT[0]		—
—	EIRQ[21]	SPC560Px supports this function on pad 16, but full compatibility cannot be achieved.
—	FlexRay - DBG 0	SPC560Px supports this function on pad 133, but full compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
—	DSPI 0 - CS 1	SPC560Px supports this function on pad 16, but full compatibility cannot be achieved.

A.82 Pad 82 - C[12]

Table 87. Pad 82 - C[12]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[44]		—
eTimer 0 - ETC[5]		—
DSPI 2 - CS 3		—
DSPI 3 - CS 1	—	SPC56EL60 does not include the DSPI 3.

A.83 Pad 83 - G[7]

Table 88. Pad 83 - G[7]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[103]		—
FlexPWM 0 - B[3]		—

A.84 Pad 84 - A[2]

Table 89. Pad 84 - A[2]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[2]		—
EIRQ[2]		—
DSPI 2 - SIN		—
ABS[0]		—

Table 89. Pad 84 - A[2]: fully compatible (continued)

SPC560Px	SPC56EL60	Comment
eTimer - ETC[2]		—
FlexPWM 0 - A[3]		—

A.85 Pad 85 - G[5]

Table 90. Pad 85 - G[5]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[101]		—
FlexPWM 0 - X[3]		—
—	DSPI 2 - CS 3	SPC560Px supports this function on pad 82 and 123. Compatibility can be achieved using pad 82.

A.86 Pad 86

Table 91. Pad 86: upward compatible

SPC560Px	SPC56EL60	Comment
—	GPIO[21] - [B5]	—
JTAG - TDI		—

A.87 Pad 87 - TMS

Table 92. Pad 87 - TMS: fully compatible

SPC560Px	SPC56EL60	Comment
TMS		—

A.88 Pad 88 - TCK

Table 93. Pad 88 - TCK: fully compatible

SPC560Px	SPC56EL60	Comment
TCK		—

A.89 Pad 89

Table 94. Pad 89: upward compatible

SPC560Px	SPC56EL60	Comment
—	GPIO[20] - [B4]	—
JTAG - TDO		—

A.90 Pad 90

Table 95. Pad 90: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_IO2	VSS_HV_IO	—

A.91 Pad 91

Table 96. Pad 91: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_IO2	VDD_HV_IO	—

A.92 Pad 92 - A[3]

Table 97. Pad 92 - A[3]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[3]		—
EIRQ[3]		—
eTimer 0 - ETC[3]		—
DSPI 2 - CS 0		—
FlexPWM 0 - B[3]		—
ABS[2]		—

A.93 Pad 93

Table 98. Pad 93: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_LV_COR1	VDD_LV_COR	—

A.94 Pad 94

Table 99. Pad 94: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_LV_COR1	VSS_LV_COR	—

A.95 Pad 95

Table 100. Pad 95: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[61] - D[13]	—	SPC56EL60 does not support this digital IO channel.
FlexPWM 0 - A[1]	—	SPC56EL60 supports this function on pad 15, 124 and 133. Compatibility can be achieved on pad 15 and 124.
DSPI 3 - CS 2	—	SPC56EL60 does not include the DSPI 3.
DSPI 2 - SOUT	—	Compatibility on this function can be achieved on pad 74 and 122.
—	VDD_HV_REG_1	—

A.96 Pad 96

Table 101. Pad 96: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_FL	VSS_HV_FLA	—

A.97 Pad 97

Table 102. Pad 97: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_FL	VDD_HV_FLA	—

A.98 Pad 98 - G[6]

Table 103. Pad 98 - G[6]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[102]		—
FlexPWM 0 - A[3]		—

A.99 Pad 99 - D[12]

Table 104. Pad 99 - D[12]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[60]		—
LINFlex - RXD		—
FlexPWM 0 - X[1]		—

A.100 Pad 100 - G[4]

Table 105. Pad 100 - G[4]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[100]		—
FlexPWM 0 - B[2]		—
—	eTimer 0 - ETC[5]	Compatibility on this function can be achieved on pad 47 and pad 82.

A.101 Pad 101 - C[13]

Table 106. Pad 101 - C[13]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[45]		—
CTU 0 - EXT IN		—
FlexPWM 0 - Ext Sync		—
eTimer 1 - ETC[1]		—

A.102 Pad 102 - G[2]

Table 107. Pad 102 - G[2]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[98]		—
FlexPWM 0 - X[2]		—
—	DSPI 1 - CS 1	SPC560Px supports this function on pad 130, but compatibility cannot be achieved.

A.103 Pad 103 - C[14]

Table 108. Pad 103 - C[14]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[46]		—
eTimer 1 - ETC[2]		—
CTU 0 - EXT TGR		—

A.104 Pad 104 - G[3]

Table 109. Pad 104 - G[3]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[99]		—
FlexPWM 0 - A[2]		—
—	eTimer 0 - ETC[4]	Compatibility on this function can be achieved on pad 64, 80 and108.

A.105 Pad 105 - D[14]

Table 110. Pad 105 - D[14]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[62]		—
FlexpWM 0 - B[1]		—
DSPI 3 - SIN	—	SPC56EL60 does not include the DSPI 3.
DSPI 3 - CS 3	—	
—	eTimer 0 - ETC[3]	Compatibility on this function can be achieved using pad 92.

A.106 Pad 106 - F[12]

Table 111. Pad 106 - F[12]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[92]		—
eTimer 1 - ETC[3]		—
—	EIRQ[30]	SPC560Px supports this function on pad 96. Compatibility cannot be achieved.

A.107 Pad 107 - VPP_TEST

Table 112. Pad 107 - VPP_TEST: fully compatible

SPC560Px	SPC56EL60	Comment
VPP_TEST		—

A.108 Pad 108 - A[4]

Table 113. Pad 108 - A[4]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[4]		—
EIRQ[4]		—
FAB		—
DSPI 2 - CS 1		—
eTimer 0 - ETC[4]		—
eTimer 1 - ETC[0]		—

A.109 Pad 109 - B[0]

Table 114. Pad 109 - B[0]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[16]		—
EIRQ[15]		—
CAN 0 - TXD		—
eTimer 1 - ETC[2]		—
SSCM - DEBUG[0]		—

A.110 Pad 110 - B[1]

Table 115. Pad 110 - B[1]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[17]		—
EIRQ[16]		—
CAN 0 - RXD		—
eTimer 1 - ETC[3]		—

Table 115. Pad 110 - B[1]: upward compatible (continued)

SPC560Px	SPC56EL60	Comment
SSCM - DEBUG[1]		—
—	CAN 1 - RXD	Compatibility on this function can be achieved on pad 144.

A.111 Pad 111 - C[10]

Table 116. Pad 111 - C[10]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[42]		—
FlexPWM 0 - FAULT[1]		—
DSPI 2 - CS 2		—
FlexPWM 0 - A[3]		—

A.112 Pad 112 - F[13]

Table 117. Pad 112 - F[13]: upward compatible

SPC560Px	SPC56EL60	Comment
GPIO[93]		—
eTimer 1 - ETC[4]		—
—	EIRQ[31]	SPC560Px supports this function on pad 141. Compatibility cannot be achieved.

A.113 Pad 113 - F[15]

Table 118. Pad 113 - F[15]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[95]		—
LINFlex 1 - RXD		—

A.114 Pad 114 - B[2]

Table 119. Pad 114 - B[2]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[18]		—
EIRQ[17]		—

Table 119. Pad 114 - B[2]: fully compatible (continued)

SPC560Px	SPC56EL60	Comment
LINFlex 0 - TXD		—
SSCM - DEBUG[2]		—

A.115 Pad 115 - F[14]

Table 120. Pad 115 - F[14]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[94]		—
LINFlex 1 - TXD		—

A.116 Pad 116 - B[3]

Table 121. Pad 116 - B[3]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[19]		—
LINFlex 0 - RXD		—
SSCM - DEBUG[3]		—

A.117 Pad 117 - E[13]

Table 122. Pad 117 - E[13]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[77]		—
EIRQ[25]		—
DSPI 3 - SCK	—	SPC56EL60 does not include the DSPI 3.
—	eTimer 0 - ETC[5]	Compatibility on this functionality can be achieved on pad 24 and 82.
—	DSPI 2 - CS 3	SPC560Px supports this function on pad 82 and 123. Compatibility can be achieved pad 82.

A.118 Pad 118 - A[10]

Table 123. Pad 118 - A[10]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[10]		—
EIRQ[9]		—
DSPI 2 - CS 0		—
FlexPWM 0 - B[0]		—
FlexPWM 0 - X[2]		—

A.119 Pad 119 - E[14]

Table 124. Pad 119 - E[14]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[78]		—
EIRQ[26]		—
DSPI 3 - SOUT	—	SPC56EL60 does not include the DSPI 3.
—	eTimer 1 - ETC[5]	Compatibility can be achieved using pad 14, 129 and 144.

A.120 Pad 120 - A[11]

Table 125. Pad 120 - A[11]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[11]		—
EIRQ[10]		—
DSPI 2 - SCK		—
FlexPWM 0 - A[0]		—
FlexPWM 0 - A[2]		—

A.121 Pad 121 - E[15]

Table 126. Pad 121 - E[15]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[79]		—
EIRQ[27]		—

Table 126. Pad 121 - E[15]: partially compatible (continued)

SPC560Px	SPC56EL60	Comment
DSPI 3 - SIN	—	SPC56EL60 does not include the DSPI 3.
—	DSPI 0 - CS 1	SPC560Px supports this function on pad 16, but compatibility cannot be achieved.

A.122 Pad 122 - A[12]

Table 127. Pad 122 - A[12]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[12]		—
EIRQ[11]		—
DSPI 2 - SOUT		—
FlexPWM 0 - A[2]		—
FlexPWM 0 - B[2]		—

A.123 Pad 123

Table 128. Pad 123: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[41] - C[9]	—	SPC56EL60 does not support this function.
FlexPWM 0 - FAULT[2]	—	SPC56EL60 supports this function on pad 33 and 77. Compatibility can be achieved using pad 77.
DSPI 2 - CS 3	—	SPC56EL60 supports this function on pad 77, 82, 85 and 117. Compatibility can be achieved using pad 82.
FlexPWM 0 - X[3]	—	SPC56EL60 supports this function on pad 34, 85 and 140. Compatibility can be achieved using pad 85 and 140.
—	JCOMP	SPC560Px does not support this function.

A.124 Pad 124 - C[15]

Table 129. Pad 124 - C[15]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[47]		—
CTU 0 - EXT IN		—
FlexPWM 0 - Ext Sync		—

Table 129. Pad 124 - C[15]: fully compatible (continued)

SPC560Px	SPC56EL60	Comment
FlexRay - CA TR		—
eTimer 1 - ETC[0]		—
FlexPWM 0 - A[1]		—

A.125 Pad 125 - D[0]

Table 130. Pad 125 - D[0]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[48]		—
FlexRay - CA TX		—
eTimer 1 - ETC[1]		—
FlexPWM 0 - B[1]		—

A.126 Pad 126

Table 131. Pad 126: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_HV_IO3	VDD_HV_IO	—

A.127 Pad 127

Table 132. Pad 127: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_HV_IO3	VSS_HV_IO	—

A.128 Pad 128 - D[3]

Table 133. Pad 128 - D[3]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[51]		—
FlexRay - CB TX		—
eTimer 1 - ETC[4]		—
FlexPWM 0 - A[3]		—

A.129 Pad 129 - D[4]

Table 134. Pad 129 - D[4]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[52]		—
FlexRay 0 - CB TR EN		—
eTimer 1 - ETC[5]		—
FlexPWM 0 - B[3]		—

A.130 Pad 130

Table 135. Pad 130: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[40] - C[8]	—	SPC56EL60 does not support this feature.
FlexPWM 0 - FAULT[2]	—	SPC56EL60 supports this function on pad 33 and 77. Compatibility can be achieved using pad 77.
DSPI 1 - CS 1	—	SPC56EL60 supports this function on pad 79 and 102. Compatibility cannot be achieved.
DSPI 0 - CS 6	—	SPC56EL60 supports this function on pad 139. Compatibility cannot be achieved.
—	VDD_HV_REG_2	—

A.131 Pad 131

Table 136. Pad 131: fully compatible

SPC560Px	SPC56EL60	Comment
VDD_LV_COR2	VDD_LV_COR	—

A.132 Pad 132

Table 137. Pad 132: fully compatible

SPC560Px	SPC56EL60	Comment
VSS_LV_COR2	VSS_LV_COR	—

A.133 Pad 133 - F[0]

Table 138. Pad 133 - F[0]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[80]		—
EIRQ[28]		—
FlexRay - DBG 0	—	SPC56EL60 supports this function on pad 81, but compatibility on this function cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
DSPI 3 - CS 3	—	SPC56EL60 does not include the DSPI 3.
—	FlexPWM 0 - A[1]	SPC560Px supports this function on pad 15, 95 and124. Compatibility can be achieved using pad 15 and 124.
—	eTimer 0 - ETC[2]	Compatibility on this function can be achieved using pad 84.

A.134 Pad 134 - A[9]

Table 139. Pad 134 - A[9]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[9]		—
FlexPWM 0 - FAULT[0]		—
DSPI 2 - CS 1		—
FlexPWM 0 - B[3]		—

A.135 Pad 135

Table 140. Pad 135: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[81] - F[1]	—	SPC56EL60 does not support this function.
EIRQ[29]	—	SPC56EL60 supports this function on pad 79. Compatibility cannot be achieved.
FlexRay - DBG 1	—	SPC56EL60 supports this function on pad 79. Compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
DSPI 3 - CS 2	—	SPC56EL60 does not include the DSPI 3.
—	VDD_LV_COR	—

A.136 Pad 136 - A[13]

Table 141. Pad 136 - A[13]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[13]		—
EIRQ[12]		—
DSPI 2 - SIN		—
FlexPWM 0 - FAULT[0]		—
FlexPWM 0 - B[2]		—

A.137 Pad 137

Table 142. Pad 137: non-compatible

SPC560Px	SPC56EL60	Comment
GPIO[82] - F[2]	—	SPC56EL60 does not support this digital IO.
FlexRay - DBG 2	—	SPC56EL60 supports this function on pad 77. Compatibility cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
DSPI 3 - CS 1	—	SPC56EL60 does not include the DSPI 3.
—	VSS_LV_COR	—

A.138 Pad 138 - B[6]

Table 143. Pad 138 - B[6]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[22]		—
EIRQ[18]		—
CLKOUT		—
DSPI 2 - CS 2		—

A.139 Pad 139 - F[3]

Table 144. Pad 139 - F[3]: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[83]		—
FlexRay - DBG 3	—	SPC56EL60 supports this function on pad 75, but on this function cannot be achieved. This function is used for debugging purposes according to the FlexRay protocol.
DSPI 3 - CS 0	—	SPC56EL60 does not include the DSPI 3.
—	DSPI 0 - CS6	SPC560Px supports this function on pad 130 but compatibility cannot be achieved.

A.140 Pad 140 - D[2]

Table 145. Pad 140 - D[2]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[50]		—
FlexRay - CB RX		—
eTimer 1 - ETC[3]		—
FlexPWM 0 - X[3]		—

A.141 Pad 141

Table 146. Pad 141: partially compatible

SPC560Px	SPC56EL60	Comment
GPIO[97] - G[1]	—	SPC56EL60 does not support this digital IO.
EIRQ[31]	—	SPC56EL60 supports this function on pad 112, but compatibility cannot be achieved.
FCU - F[1]	FCCU - F[1]	—

A.142 Pad 142 - C[6]

Table 147. Pad 142 - C[6]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[38]		—
EIRQ[24]		—
DSPI 0 - SOUT		—
FlexPWM 0 - B[1]		—
SSCM - DEBUG[6]		—

A.143 Pad 143 - A[14]

Table 148. Pad 143 - A[14]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[14]		—
EIRQ[13]		—
Safety Port - TX		—
eTimer - ETC[4]		—

A.144 Pad 144 - A[15]

Table 149. Pad 144 - A[15]: fully compatible

SPC560Px	SPC56EL60	Comment
GPIO[15]		—
EIRQ[14]		—
eTimer 1 - ETC[5]		—
Safety Port - RX	CAN 1 - RXD	—

Revision history

Table 150. Document revision history

Date	Revision	Changes
08-Mar-2011	1	Initial release

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